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 Gln Gln Gln His Leu Gln Gln Gln Gln Met Pro Gln Leu Gln Gln Gln
 705 710 715 720
 Gln Gln Gln His Gln Gln Gln Gln Gln Gln His Gln Leu Ser Gln
 725 730 735
 Leu Gln His His Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
 740 745 750
 Gln His Gln Leu Thr Gln Leu Gln His His His Gln Gln Gln Gln Gln
 755 760 765
 Ala Ser Pro Leu Asn Gln Met Gln Gln Gln Thr Ser Pro Leu Asn Gln
 770 775 780
 Met Gln Gln Gln Thr Ser Pro Leu Asn Gln Met Gln Gln Gln Gln Gln
 785 790 795 800
 Pro Gln Gln Met Val Met Gly Gly Gln Ala Phe Ala Gln Ala Pro Gly
 805 810 815
 Arg Ser Gln Gln Gly Gly Gly Gly Gly Gln Pro Asn Met Pro Gly Ala
 820 825 830
 Gly Phe Met Gly
 835

<210> 4
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 4
 cagaggaacc ctgtttctac tgttgagct

29

<210> 5
 <211> 29

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 5
 cgttacttgg ttgagcttgg cctgaagga 29

 <210> 6
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 6
 tcccgacat gaagccattt atatgta 27

 <210> 7
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> FT PCR Primer

 <400> 7
 gctacaactg gaacaacctt tggcaat 27

 <210> 8
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> CO PCR Primer

 <400> 8
 tataggcatc atcaccgttc gttactc 27

 <210> 9
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 9
 aaactctttc agctccatga ccactact 28

 <210> 10
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Primer for UBQ10

 <400> 10
 ccatggatga aatgtatgcg ttatgggta 29

 <210> 11
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 11
 gggtgcagaa ctctccacct caagagta 28

 <210> 12
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> PCR Primer

 <400> 12
 tcaattctct ctaccgtgat caagatgca 29

 <210> 13
 <211> 724
 <212> PRT
 <213> Saccharum officinarum

 <220>
 <221> VARIANT
 <222> 5017
 <223> Xaa = Any Amino Acid

 <221> VARIANT
 <222> 666
 <223> Xaa = Any Amino Acid

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 Ala Leu Gly Pro Tyr Trp Ser Thr Ile Val Ala Glu Tyr Val Glu Lys
 20 25 30
 Ile Val Arg Ser Phe Cys Ala Ser Glu Leu Pro Gly Gln Lys Leu Ala
 35 40 45
 Gly Ala Pro Pro Glu Leu Ala Leu Val Val Phe His Thr His Gly Pro
 50 55 60
 Tyr Ser Ala Phe Asp Val Gln Arg Ser Gly Trp Thr Lys Asp Thr Asp
 65 70 75 80
 Ala Phe Leu Ser Trp Leu Ser Gly Ile Ser Phe Ser Gly Gly Gly Phe
 85 90 95

Ser Glu Ala Ser Thr Cys Glu Gly Leu Ala Glu Ala Leu Lys Ile Leu
 100 105 110
 Gln Gly Ser Pro Asn Thr Thr Gln Ser His Gln Asn His Glu Ala Gln
 115 120 125
 Lys His Cys Ile Leu Val Ala Ala Ser Asn Pro Tyr Pro Leu Pro Thr
 130 135 140
 Pro Val Tyr Cys Leu Pro Thr Gln Ser Thr Asp His Lys Glu Asn Ile
 145 150 155 160
 Glu Thr Ala Lys Glu Pro Ser Ile Ala Asp Ala Glu Thr Val Ala Lys
 165 170 175
 Ser Phe Ala Gln Cys Ser Val Ser Leu Ser Val Ile Ser Pro Lys Gln
 180 185 190
 Leu Pro Thr Leu Lys Ala Ile Tyr Asn Ala Gly Lys Arg Asn Pro Arg
 195 200 205
 Ala Ala Asp Pro Ser Val Asp His Ala Lys Asn Pro His Phe Leu Val
 210 215 220
 Leu Leu Ser Glu Asn Phe Met Glu Ala Arg Thr Ala Leu Ser Arg Pro
 225 230 235 240
 Leu His Gly Asn Leu Ala Pro Asn Gln Thr Ile Thr Lys Met Asp Thr
 245 250 255
 Ala Pro Ala Val Thr Met Pro Gly Pro Thr Ser Asn Ala Asn Pro Ser
 260 265 270
 Gly Arg Gln Pro Val Val Gly Gly Ile Ser Thr Ala Thr Val Lys Val
 275 280 285
 Glu Pro Ala Thr Met Pro Pro Ile Val Ser Ala Pro Ala Phe Ser His
 290 295 300
 Val Thr Pro Ile Ser Asn Val Ala Ser Gln Gly Ile Ser Ala Leu Gln
 305 310 315 320
 Thr Ser Ser Pro Ser Leu Ile Ser Gln Glu Ala Asn Met Ala Asn Asp
 325 330 335
 Asn Val Gln Glu His Lys Pro Ile Ile Asn Pro Val Gln Gln Pro Val
 340 345 350
 Arg Pro Gly His Gly Ser Leu Asn Asn Leu Ser Gln Val Arg
 355 360 365
 Leu Met Asn Ser Thr Ser Leu Gly Gly Ala Thr Ser Met Gly Leu
 370 375 380
 Pro Asn Ile Gly Ala Thr Pro Ile Gln Val His Met Ser Asn Met Ile
 385 390 395 400
 Ser Ser Gly Met Thr Ser Thr Pro Ser Val Ile Ser Ser Met Ser Gly
 405 410 415
 Pro Gly His Pro Ile Gly Thr Gln Gln Met Ile Gln Ser Thr Ala Leu
 420 425 430
 Gly Ser Phe Gly Ser Asn Thr Ser Thr Val Ser Gly Asn Ser Asn Val
 435 440 445
 Ala Val Ser Ser Ser Leu Thr Asn Asn Gln Ser Ser Met Gly Met Gly
 450 455 460
 Gln Ser Val Gln Pro Val Ala Gln Gly Gly Leu Val Ala Gly Ser Gln
 465 470 475 480
 Leu Gly Gln Gly Gly Ile Gly Ala Asn Gln Asn Val Met Ser Ser Leu
 485 490 495
 Gly Ser Thr Ala Ile Ser Ser Ala Pro Ala Met Met Pro Thr Pro Gly
 500 505 510
 Met Val Pro Gln Thr Gly Val Asn Ser Leu Gly Val Asn Asn Asn Pro
 515 520 525
 Ala Met Asn Met Pro Ile Pro Gln His Ala Asn Ala Gln Gln Pro Ala
 530 535 540
 Pro Lys Tyr Val Lys Ile Trp Glu Gly Thr Leu Ser Gly Gln Arg Gln

545 550 555 560
 Gly Gln Pro Val Phe Ile Cys Lys Leu Glu Gly Tyr Arg Ser Gly Thr
 565 570 575
 Ala Ser Glu Thr Leu Ala Ala Asp Trp Pro Glu Thr Met Gln Ile Val
 580 585 590
 Arg Leu Ile Ala Gln Glu His Met Asn Asn Lys Gln Tyr Val Gly Lys
 595 600 605
 Ala Asp Phe Leu Val Phe Arg Thr Leu Asn Gln His Gly Phe Leu Gly
 610 615 620
 Gln Leu Gln Glu Lys Lys Leu Cys Ala Val Ile Gln Leu Pro Ser Gln
 625 630 635
 Thr Leu Leu Leu Ser Met Ser Asp Lys Ala Arg Arg Leu Ile Gly Met
 645 650 655
 Leu Phe Pro Ala Asp Met Val Val Ser Xaa Pro Gln Val Pro Thr Gln
 660 665 670
 Gln Thr Gln Leu Gln Gln Gln Leu Gln Gln Gln Leu Pro Lys Gln
 675 680 685
 Gln Gln Leu Gln Gln Glu Leu Gln Gln Gln His Met His Met Gln
 690 695 700
 His Gln Ala Ser Asn Ser Glu Ala Glu Met His Phe Ser Lys Ala Glu
 705 710 715 720
 Ala Gln Met Pro

<210> 14
 <211> 582
 <212> PRT
 <213> Sorghum bicolor

<400> 14
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 Pro Pro Glu Leu Ala Leu Val Val Phe His Thr His Gly Pro Tyr Ser
 35 40 45
 Ala Phe Asp Val Gln Arg Ser Gly Trp Thr Lys Asp Thr Asp Ala Phe
 50 55 60
 Leu Ser Trp Leu Ser Gly Ile Ser Phe Ser Gly Gly Phe Ser Glu
 65 70 75 80
 Ala Ser Thr Cys Glu Gly Leu Ala Glu Ala Leu Lys Ile Leu Gln Gly
 85 90 95
 Ser Pro Asn Ala Thr Gln Ser His Gln Asn His Glu Ala Gln Lys His
 100 105 110
 Cys Ile Leu Val Ala Ala Ser Asn Pro Tyr Pro Leu Pro Thr Pro Val
 115 120 125
 Tyr Cys Leu Pro Thr Gln Ser Thr Asp His Lys Glu Asn Ile Glu Thr
 130 135 140
 Ser Lys Glu Pro Ser Ile Ala Asp Ala Glu Thr Val Ala Lys Ser Phe
 145 150 155 160
 Ala Gln Cys Ser Val Ser Leu Ser Val Ile Ser Pro Lys Gln Leu Pro
 165 170 175
 Thr Leu Lys Ala Ile Tyr His Glu Ala Val Val Ala Val Glu Ala Phe
 180 185 190
 Arg Ala Tyr Lys Glu Lys Val Ala Asn Leu Thr Gly Val Thr Arg Lys
 195 200 205

Phe Met Gly Asn Leu Val Lys Ala Phe Lys Thr Asn Leu Pro Glu Val
 210 215 220
 Val Val Thr Pro Ala Ala Phe Asp Phe Asp His Ile Val Asn Gly Pro
 225 230 235 240
 Thr Met Gly Ser Gln Thr Ala Gly Val Gly Gly Ile Ile Ser Thr Ala
 245 250 255
 Thr Val Thr Leu Glu Gln Pro Ala Met Glu Pro Met Val Ser Gly Ser
 260 265 270
 Ala Gly Phe Trp His Ser Ala Leu Gln Gln Pro Ser Ser Ser Leu
 275 280 285
 Ile Ser Gln Glu Ala Asn Ile Ala Asn Asp Ser Val Gln Glu His Arg
 290 295 300
 Pro Ile Arg Ser Pro Val Gln His Pro Val Arg Pro Gly Arg His Gly
 305 310 315 320
 Gly Leu Leu Ser Asn Pro Ser Gln Phe Gln Pro Ile His Ser Thr Phe
 325 330 335
 Phe Gly Glu Ala Thr Thr Ser Met Gly Pro Pro Asn Ile Gly Ala Ile
 340 345 350
 Thr Pro Leu Gln Phe Asn Met Ser Asn Met Ile Ser Ser Gly Ala Thr
 355 360 365
 Ser Thr Pro Leu Val Thr Phe Ser Met Ser Ala Pro Gly Gln Pro Ile
 370 375 380
 Gly Asn Gln Asp Met Val Gln Ser Thr Ala Leu Gly Ser Phe Gly Ser
 385 390 395 400
 Asn Thr Ser Thr Ala Trp Asp Asn Ser Asp Ile Ala Glu Ser Ser Ser
 405 410 415
 Gln Pro Asn Ser Met Ala Met Asn Arg Gln Ala Gly Ile Asn Pro Leu
 420 425 430
 Ser Ser Ala Met Asn Ala Pro Ile Gly Met His His Asn Ala Gln Gln
 435 440 445
 Pro Pro Pro Lys Tyr Val Lys Ile Trp Glu Gly Thr Leu Ser Gly Gln
 450 455 460
 Arg Gln Gly Arg Pro Val Phe Ile Ser Arg Leu Glu Gly Trp Ser Gly
 465 470 475 480
 Ile Val Ser Lys Thr Val Ala Ala Asp Trp Pro Glu Thr Met Gln Ile
 485 490 495
 Val Arg Leu Ile Ala Gln Glu His Met Asn Asn Lys Gln Tyr Val Trp
 500 505 510
 Lys Gly Arg Leu Ser Asn Ile Ser Asp Phe Lys Ser Ala Trp Phe Leu
 515 520 525
 Gly Gln Leu Gln Glu Arg Lys Leu Cys Ala Val Ile Gln Leu Pro Ser
 530 535 540
 Gln Thr Leu Pro Leu Ser Met Ser Asp Lys Ala Gly Arg Met Ile Gly
 545 550 555 560
 Met Leu Phe Pro Glu Asn Met Val Ile Phe Lys Pro Glu Val Val Thr
 565 570 575
 Gln Pro Ser Leu Val Arg
 580

<210> 15
 <211> 741
 <212> PRT
 <213> Medicago truncatula

<220>
 <221> VARIANT

<222> 1381

<223> Xaa = Any Amino Acid

<221> VARIANT

<222> 177, 188, 451, 454, 458

<223> Xaa = Any Amino Acid

<400> 15

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20 25 30
Arg Cys Leu Gly Gly Asn Glu Ser Thr Gly Gln Lys Pro Ser Gly Ser
35 40 45
Asn Val Glu Phe Ser Leu Val Thr Tyr Asn Thr His Gly Cys Tyr Ser
50 55 60
Gly Ile Leu Val Gln Arg Thr Gly Trp Thr Arg Asp Pro Asp Val Phe
65 70 75 80
Leu Gln Trp Leu Glu Ser Ile Pro Phe Ser Gly Gly Gly Phe Asn Asp
85 90 95
Ala Ala Ile Ala Glu Gly Leu Ala Glu Ala Leu Met Met Phe Pro Pro
100 105 110
Ser Gln Ser Gly Gly Leu Asn Gln Gln Asn Val Asp Thr Asn Met His
115 120 125
Cys Ile Leu Val Ala Ala Ser Asn Pro Tyr Pro Leu Gln Thr Pro Val
130 135 140
Tyr Val Pro Gln Leu Gln Ser Leu Glu Lys Thr Glu Ser Ile Asp Ser
145 150 155 160
Asn Gln Val Asn Gln Leu Tyr Asp Ala Glu Ala Val Ala Lys Ala Phe
165 170 175
Xaa Gln Phe Asn Ile Ser Leu Ser Val Val Cys Xaa Lys Gln Asn Phe
180 185 190
Ser His Leu Gln Cys Gly Arg Ala Lys Gly Arg Ser Ala Asp Pro Pro
195 200 205
Val Asp Pro Lys Thr Thr His Phe Leu Ile Leu Ile Ser Glu Gly Phe
210 215 220
Arg Glu Ala Arg Ser Ala Leu Ser Arg Pro Gly Thr Asn Met Pro Ser
225 230 235 240
Asn Gln Ser Pro Val Lys Val Asp Ala Val Ser Ala Thr Pro Val Thr
245 250 255
Gly Ala Pro Pro Ser Ser Leu Pro Ser Val Asn Gly Ser Ile Pro Asn
260 265 270
Arg Gln Pro Ile Pro Ala Gly Asn Val Thr Pro Ala Thr Val Lys Val
275 280 285
Glu Gln Val Pro Val Thr Ser Gly Pro Ala Phe Ser His Asn Pro Ser
290 295 300
Val Pro Arg Ala Thr Gly Thr Gly Leu Gly Val Pro Ser Leu Gln Thr
305 310 315 320
Ser Ser Pro Ser Ser Val Ser Gln Asp Ile Met Thr Ser Asn Glu Asn
325 330 335
Ala Met Asp Thr Lys Pro Ile Val Ser Met Leu Gln Pro Ile Arg Pro
340 345 350
Val Asn Pro Ala Gln Ala Asn Val Asn Ile Leu Asn Asn Leu Ser Gln
355 360 365
Ala Arg Gln Val Met Ala Leu Ser Gly Gly Thr Ser Met Gly Leu Gln
370 375 380

Ser Met Gly Gln Thr Pro Val Ala Met His Met Ser Asn Met Ile Ser
 385 390 395 400
 Ser Gly Thr Thr Ser Ser Gly Pro Thr Gly Gln Asn Val Phe Ser Ser
 405 410 415
 Gly Pro Ser Val Ile Thr Ser Ser Gly Ser Leu Thr Ala Ser Ala Gln
 420 425 430
 Val Gly Gln Asn Ser Gly Leu Ser Ser Leu Thr Ser Ala Thr Ser Asn
 435 440 445
 Ser Ser Xaa Cys Leu Xaa Glu Phe Leu Xaa Phe Val Arg Gly Gly Lys
 450 455 460
 Val Arg Ser Lys Phe Val Val Leu Arg Gly Pro Ala Lys Met Met Gln
 465 470 475 480
 Asn Gly Val Asn Met Asp Glu Ile Gly Gly Gln Ser His Glu Thr Gln
 485 490 495
 Asn Gly Trp His Arg Ser Ser Pro Ile Trp Glu Gly Ser Leu Tyr Gly
 500 505 510
 Arg Lys Gln Gly Glu Pro Ile Phe Ile Thr Lys Leu Glu Gly Tyr Arg
 515 520 525
 Arg Ser Ser Ala Ser Glu Thr Leu Ala Ala Asn Trp Pro Pro Glu Met
 530 535 540
 His Ile Val Arg Ile Ile Ser Gln Asp His Met Asn Asn Lys Lys Tyr
 545 550 555 560
 Val Gly Glu Ala Asp Phe Leu Val Phe Arg Ala Arg Asn Thr His Gly
 565 570 575
 Phe Leu Gly Leu Leu Gln Glu Lys Lys Leu Cys Ala Val Ile Gln Leu
 580 585 590
 Gln Ser Gln Thr Leu Leu Leu Ser Val Ser Asp Lys Ala Cys Arg Leu
 595 600 605
 Met Gly Val Leu Phe Pro Gly Asp Lys Leu Val Ser Lys Ser Gln Leu
 610 615 620
 Ser Gly Gln Gln Gln Gln Gln Met Gln Gln Gln Met Gln Gln
 625 630 635 640
 His Gln Gln Met Gln Ser Gln Gln Gln His Leu Pro Gln Leu Gln Gln
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 Gln Met Gln Gln Gln Gln Gln Gln Gln Leu Pro Gln Leu Gln Gln
 660 665 670
 Asn Gln Gln Leu Ser Gln Ile Gln Gln Gln Ile Pro Gln Leu Gln Gln
 675 680 685
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 690 695 700
 Gln Gln Gln Gln Gln Gln Leu Pro Gln Leu Gln Gln Leu Gln His Gln
 705 710 715 720
 Gln Leu Pro Gln Gln Gln Met Gly Trp Cys Trp Asn Gly Ser Asn
 725 730 735
 Leu Cys Ser Arg Ser
 740

<210> 16

<211> 15075

<212> DNA

<213> O. Sartiva

<400> 16

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 tgtgcttaaa atactttgaa taataaagta agtcacacaa aaaataaata ataattccaa 180

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ggtttgtctg	attctgttaag	ccacaagcca	tctttaaata	tcttctcctt	gtatatttact	4680
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gaatatatct	tttaaaaaaa	attataagca	tgaacttgca	gaaactggcg	ctccactatt	4800
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Pro	Asn	Ala	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln
			500					505					510		
Gln	Pro	Pro	Pro	Lys	Tyr	Val	Lys	Ile	Trp	Glu	Gly	Thr	Leu	Ser	Gly
			515				520				525				
Gln	Arg	Gln	Gly	Gln	Pro	Val	Phe	Ile	Cys	Lys	Leu	Glu	Gly	Tyr	Arg
			530				535				540				
Ser	Gly	Thr	Ala	Ser	Glu	Thr	Leu	Ala	Ala	Asp	Trp	Pro	Glu	Thr	Met
545					550				555						560
Gln	Ile	Val	Arg	Leu	Ile	Ala	Gln	Glu	His	Met	Asn	Asn	Lys	Gln	Tyr
				565					570					575	
Val	Gly	Lys	Ala	Asp	Phe	Leu	Val	Phe	Arg	Thr	Leu	Asn	Gln	His	Gly
			580					585					590		
Phe	Leu	Gly	Gln	Leu	Gln										

Gln	Gln	Gln	Leu	Gln	Gln	His	Met	Gln	Leu	Gln	Thr	Gln	Gly	Leu	Pro
690						695					700				
Leu	Gln	Gln	Gln	Gln	Ser	Gln	Gly	His	Pro	Leu	Gln	Gln	Gln	Gln	Met
705					710					715					720
Gln	Gln	Met	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ile	Gln	Gln	Met	Gln
					725					730					735
Gln	Gln	Gln	Gln	Met	Gln	Gln	Met	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Gln
					740					745					750
Gln	Leu	Gln	Gln	Gln	Gln	Gln	Pro	Gln	Met	Val	Gly	Thr	Gly	Met	Gly
					755					760					765
Gln	Gln	Gln	Pro	Gln	Met	Val	Gly	Thr	Gly	Met	Gly	Gln	Gln	Gln	Pro
					770					775					780
Gln	Met	Val	Gly	Ala	Gly	Met	Gly	Gln	Gln	Tyr	Met	Gln	Gly	His	Gly
					785					790					800
Arg	Thr	Val	Gln	Gln	Met	Met	Gln	Gly	Lys	Met	Ala	Pro	Gln	Gly	Pro
					805					810					815
Gly	Ser	Met	Pro	Gly	Ala	Gly	Ser	Met	Pro	Gly	Gly	Gly	Tyr	Leu	Ser
					820					825					830